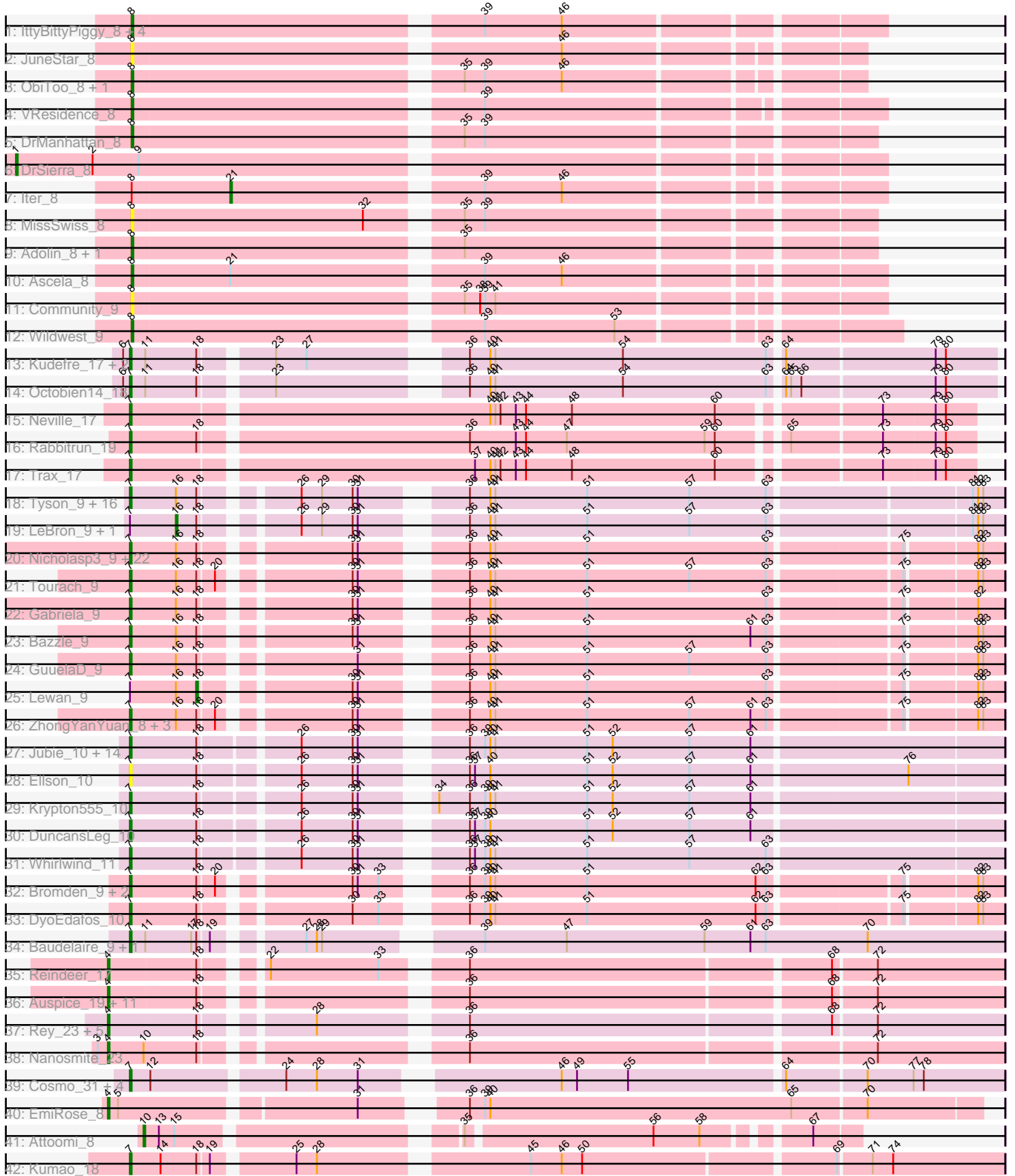


Pham 163442



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 163442 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163442 has 129 members, 14 are drafts.

Phages represented in each track:

- Track 1 : IttyBittyPiggy_8, Pumpkins_17, Nitro_8, Cassia_8, Yang_8
- Track 2 : JuneStar_8
- Track 3 : ObiToo_8, Crewmate_9
- Track 4 : VResidence_8
- Track 5 : DrManhattan_8
- Track 6 : DrSierra_8
- Track 7 : Iter_8
- Track 8 : MissSwiss_8
- Track 9 : Adolin_8, Reedo_8
- Track 10 : Ascela_8
- Track 11 : Community_9
- Track 12 : Wildwest_9
- Track 13 : Kudrefre_17, Sephiroth_18, Syleon_18
- Track 14 : Octobien14_18
- Track 15 : Neville_17
- Track 16 : Rabbitrun_19
- Track 17 : Trax_17
- Track 18 : Tyson_9, Wyatt2_9, CicholasNage_9, AvadaKedavra_9, JoeDirt_9, Wamburgrxpress_9, Appletree2_9, Zaria_9, Rose5_9, MAckerman_9, Enceladus_9, Calm_9, DirkDirk_9, Silverleaf_9, Halena_9, Acquire49_9, OhShagHennessy_9
- Track 19 : LeBron_9, UPIE_9
- Track 20 : Nicholasp3_9, Vetrrix_9, BobsGarage_9, Kahlid_9, Miley16_9, Netyap_9, LilDestine_9, Faith1_9, Winky_9, BigCheese_9, Finemlucis_9, Zakai_9, Gardann_9, DrSeegs_9, Wilder_9, MkaliMitinis3_9, Breezona_9, Crossroads_9, Itos_9, Hafay_9, Wigglewiggle_9, Rumpelstiltskin_9, Loadrie_9
- Track 21 : Tourach_9
- Track 22 : Gabriela_9
- Track 23 : Bazzle_9
- Track 24 : GuuelaD_9
- Track 25 : Lewan_9
- Track 26 : ZhongYanYuan_8, Claus_9, Baoshan_8, Archie_9
- Track 27 : Jubie_10, Kingsolomon_10, Snenia_10, Finnry_10, Nicholas_10, Moostard_10, MiniMac_10, MsGreen_10, Jobypre_10, Bellis_10, Clautastrophe_10, MiniLon_10, Samty_10, Lolly9_10, Lumos_10
- Track 28 : Ellson_10
- Track 29 : Krypton555_10
- Track 30 : DuncansLeg_10

- Track 31 : Whirlwind_11
- Track 32 : Bromden_9, Douge_9, Chaser_9
- Track 33 : DyoEdafos_10
- Track 34 : Baudelaire_9, Aegeus_9
- Track 35 : Reindeer_17
- Track 36 : Auspice_19, IPhane7_19, Skinny_20, Bricole_19, Glaske16_20, PegLeg_19, LilhomieP_18, TyDawg_19, Bongo_19, SlimJimmy_18, Dulcita_20, Diminimus_20
- Track 37 : Rey_23, GenevaB15_23, GardenSalsa_23, Aziz_23, Estes_24, MrMagoo_23
- Track 38 : Nanosmite_23
- Track 39 : Cosmo_31, MaryV_31, EniyanLRS_28, Azrael100_30, Wildcat_31
- Track 40 : EmiRose_8
- Track 41 : Attoomi_8
- Track 42 : Kumao_18

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 7, it was called in 77 of the 115 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_9, Aegeus_9, Appletree2_9, Archie_9, AvadaKedavra_9, Azrael100_30, Baoshan_8, Baudelaire_9, Bazzle_9, Bellis_10, BigCheese_9, BobsGarage_9, Breezona_9, Bromden_9, Calm_9, Chaser_9, CicholasNage_9, Claus_9, Clautastrophe_10, Cosmo_31, Crossroads_9, DirkDirk_9, Douge_9, DrSeegs_9, DuncansLeg_10, DyoEdafos_10, Ellson_10, Enceladus_9, EniyanLRS_28, Faith1_9, Finemlucis_9, Finnry_10, Gabriela_9, Gardann_9, GuuelaD_9, Hafay_9, Halena_9, Itos_9, Jobypre_10, JoeDirt_9, Jubie_10, Kahlid_9, Kingsolomon_10, Krypton555_10, Kudrefre_17, Kumao_18, LilDestine_9, Loadrie_9, Lolly9_10, Lumos_10, MAckerman_9, MaryV_31, Miley16_9, MiniLon_10, MiniMac_10, MkaliMitinis3_9, Moostard_10, MsGreen_10, Netyap_9, Neville_17, Nicholas_10, Nicholasp3_9, Octobien14_18, OhShagHennessy_9, Rabbitrun_19, Rose5_9, Rumpelstiltskin_9, Samty_10, Sephiroth_18, Silverleaf_9, Snenia_10, Syleon_18, Tourach_9, Trax_17, Tyson_9, Vetrix_9, Wamburggrxpress_9, Whirlwind_11, Wigglewiggles_9, Wildcat_31, Wilder_9, Winky_9, Wyatt2_9, Zakai_9, Zaria_9, ZhongYanYuan_8,

Genes that have the "Most Annotated" start but do not call it:

- LeBron_9, Lewan_9, UPIE_9,

Genes that do not have the "Most Annotated" start:

- Adolin_8, Ascela_8, Attoomi_8, Auspice_19, Aziz_23, Bongo_19, Bricole_19, Cassia_8, Community_9, Crewmate_9, Diminimus_20, DrManhattan_8, DrSierra_8, Dulcita_20, EmiRose_8, Estes_24, GardenSalsa_23, GenevaB15_23, Glaske16_20, IPhane7_19, Iter_8, IttyBittyPiggy_8, JuneStar_8, LilhomieP_18, MissSwiss_8, MrMagoo_23, Nanosmite_23, Nitro_8, ObiToo_8, PegLeg_19, Pumpkins_17, Reedo_8, Reindeer_17, Rey_23, Skinny_20, SlimJimmy_18, TyDawg_19, VResidence_8, Wildwest_9, Yang_8,

Summary by start number:

Start 1:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrSierra_8 (AZ1),

Start 4:

- Found in 21 of 129 (16.3%) of genes in pham
- Manual Annotations of this start: 21 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice_19 (M1), Aziz_23 (M2), Bongo_19 (M1), Bricole_19 (M1), Diminimus_20 (M1), Dulcita_20 (M1), EmiRose_8 (singleton), Estes_24 (M2), GardenSalsa_23 (M2), GenevaB15_23 (M2), Glaske16_20 (M1), IPhane7_19 (M1), LilhomieP_18 (M1), MrMagoo_23 (M2), Nanosmite_23 (M3), PegLeg_19 (M1), Reindeer_17 (M1), Rey_23 (M2), Skinny_20 (M1), SlimJimmy_18 (M1), TyDawg_19 (M1),

Start 7:

- Found in 89 of 129 (69.0%) of genes in pham
- Manual Annotations of this start: 77 of 115
- Called 96.6% of time when present
- Phage (with cluster) where this start called: Acquire49_9 (L1), Aegeus_9 (L5), Appletree2_9 (L1), Archie_9 (L2), AvadaKedavra_9 (L1), Azrael100_30 (V), Baoshan_8 (L2), Baudelaire_9 (L5), Bazzle_9 (L2), Bellis_10 (L3), BigCheese_9 (L2), BobsGarage_9 (L2), Breezona_9 (L2), Bromden_9 (L4), Calm_9 (L1), Chaser_9 (L4), CicholasNage_9 (L1), Claus_9 (L2), Clautastrophe_10 (L3), Cosmo_31 (V), Crossroads_9 (L2), DirkDirk_9 (L1), Douge_9 (L4), DrSeegs_9 (L2), DuncansLeg_10 (L3), DyoEdafos_10 (L4), Ellson_10 (L3), Enceladus_9 (L1), EniyanLRS_28 (V), Faith1_9 (L2), Finemlucis_9 (L2), Finnry_10 (L3), Gabriela_9 (L2), Gardann_9 (L2), GuuelaD_9 (L2), Hafay_9 (L2), Halena_9 (L1), Itos_9 (L2), Jobypre_10 (L3), JoeDirt_9 (L1), Jubie_10 (L3), Kahlid_9 (L2), Kingsolomon_10 (L3), Krypton555_10 (L3), Kudrefre_17 (DU1), Kumao_18 (singleton), LilDestine_9 (L2), Loadrie_9 (L2), Lolly9_10 (L3), Lumos_10 (L3), MAckerman_9 (L1), MaryV_31 (V), Miley16_9 (L2), MiniLon_10 (L3), MiniMac_10 (L3), MkaliMitinis3_9 (L2), Moostard_10 (L3), MsGreen_10 (L3), Netyap_9 (L2), Neville_17 (DU2), Nicholas_10 (L3), Nicholasp3_9 (L2), Octobien14_18 (DU1), OhShagHennessy_9 (L1), Rabbitrun_19 (DU2), Rose5_9 (L1), Rumpelstiltskin_9 (L2), Samty_10 (L3), Sephiroth_18 (DU1), Silverleaf_9 (L1), Snenia_10 (L3), Syleon_18 (DU1), Tourach_9 (L2), Trax_17 (DU2), Tyson_9 (L1), Vetrax_9 (L2), Wamburggrxpress_9 (L1), Whirlwind_11 (L3), Wigglewiggle_9 (L2), Wildcat_31 (V), Wilder_9 (L2), Winky_9 (L2), Wyatt2_9 (L1), Zakai_9 (L2), Zaria_9 (L1), ZhongYanYuan_8 (L2),

Start 8:

- Found in 17 of 129 (13.2%) of genes in pham
- Manual Annotations of this start: 11 of 115
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Adolin_8 (AZ1), Ascela_8 (AZ1), Cassia_8 (AZ1), Community_9 (AZ1), Crewmate_9 (AZ1), DrManhattan_8 (AZ1), IttyBittyPiggy_8 (AZ1), JuneStar_8 (AZ1), MissSwiss_8 (AZ1), Nitro_8 (AZ1), ObiToo_8 (AZ1), Pumpkins_17 (AZ1), Reedo_8 (AZ1), VResidence_8 (AZ1), Wildwest_9 (AZ1), Yang_8 (AZ1),

Start 10:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Attoomi_8 (singleton),

Start 16:

- Found in 51 of 129 (39.5%) of genes in pham
- Manual Annotations of this start: 2 of 115
- Called 3.9% of time when present
- Phage (with cluster) where this start called: LeBron_9 (L1), UPIE_9 (L1),

Start 18:

- Found in 102 of 129 (79.1%) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 1.0% of time when present
- Phage (with cluster) where this start called: Lewan_9 (L2),

Start 21:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Iter_8 (AZ1),

Summary by clusters:

There are 13 clusters represented in this pham: V, M2, DU1, singleton, L4, L5, L2, L3, M3, L1, AZ1, DU2, M1,

Info for manual annotations of cluster AZ1:

- Start number 1 was manually annotated 1 time for cluster AZ1.
- Start number 8 was manually annotated 11 times for cluster AZ1.
- Start number 21 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster DU1:

- Start number 7 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 7 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster L1:

- Start number 7 was manually annotated 16 times for cluster L1.
- Start number 16 was manually annotated 2 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 7 was manually annotated 27 times for cluster L2.
- Start number 18 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L3:

- Start number 7 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 7 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 7 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 4 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 4 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 4 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster V:

- Start number 7 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Acquire49_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Acquire49_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Adolin_8 Start: 7854, Stop: 8258, Start Num: 8

Candidate Starts for Adolin_8:

(Start: 8 @7854 has 11 MA's), (35, 8034),

Gene: Aegeus_9 Start: 6856, Stop: 7332, Start Num: 7

Candidate Starts for Aegeus_9:

(Start: 7 @6856 has 77 MA's), (11, 6865), (17, 6892), (Start: 18 @6895 has 1 MA's), (19, 6901), (27, 6943), (28, 6949), (29, 6952), (39, 7027), (47, 7075), (59, 7156), (61, 7183), (63, 7192), (70, 7252),

Gene: Appletree2_9 Start: 7220, Stop: 7687, Start Num: 7

Candidate Starts for Appletree2_9:

(Start: 7 @7220 has 77 MA's), (Start: 16 @7247 has 2 MA's), (Start: 18 @7259 has 1 MA's), (26, 7304), (29, 7316), (30, 7334), (31, 7337), (36, 7385), (40, 7397), (41, 7400), (51, 7454), (57, 7514), (63, 7559), (81, 7670), (82, 7673), (83, 7676),

Gene: Archie_9 Start: 7204, Stop: 7668, Start Num: 7

Candidate Starts for Archie_9:

(Start: 7 @7204 has 77 MA's), (Start: 16 @7231 has 2 MA's), (Start: 18 @7243 has 1 MA's), (20, 7252), (30, 7318), (31, 7321), (36, 7369), (40, 7381), (41, 7384), (51, 7438), (57, 7498), (61, 7534), (63, 7543), (75, 7615), (82, 7654), (83, 7657),

Gene: Ascela_8 Start: 7852, Stop: 8259, Start Num: 8

Candidate Starts for Ascela_8:

(Start: 8 @7852 has 11 MA's), (Start: 21 @7909 has 1 MA's), (39, 8044), (46, 8089),

Gene: Attoomi_8 Start: 6589, Stop: 6960, Start Num: 10

Candidate Starts for Attoomi_8:

(Start: 10 @6589 has 1 MA's), (13, 6598), (15, 6607), (35, 6751), (56, 6856), (58, 6883), (67, 6934),

Gene: Auspice_19 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for Auspice_19:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: AvadaKedavra_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for AvadaKedavra_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Aziz_23 Start: 11594, Stop: 12076, Start Num: 4

Candidate Starts for Aziz_23:

(Start: 4 @11594 has 21 MA's), (Start: 18 @11645 has 1 MA's), (28, 11699), (36, 11774), (68, 11978), (72, 12002),

Gene: Azrael100_30 Start: 14162, Stop: 14638, Start Num: 7

Candidate Starts for Azrael100_30:

(Start: 7 @14162 has 77 MA's), (12, 14174), (24, 14246), (28, 14264), (31, 14288), (46, 14387), (49, 14396), (55, 14426), (64, 14513), (70, 14558), (77, 14585), (78, 14591),

Gene: Baoshan_8 Start: 7059, Stop: 7523, Start Num: 7

Candidate Starts for Baoshan_8:

(Start: 7 @7059 has 77 MA's), (Start: 16 @7086 has 2 MA's), (Start: 18 @7098 has 1 MA's), (20, 7107), (30, 7173), (31, 7176), (36, 7224), (40, 7236), (41, 7239), (51, 7293), (57, 7353), (61, 7389), (63, 7398), (75, 7470), (82, 7509), (83, 7512),

Gene: Baudelaire_9 Start: 6856, Stop: 7332, Start Num: 7

Candidate Starts for Baudelaire_9:

(Start: 7 @6856 has 77 MA's), (11, 6865), (17, 6892), (Start: 18 @6895 has 1 MA's), (19, 6901), (27, 6943), (28, 6949), (29, 6952), (39, 7027), (47, 7075), (59, 7156), (61, 7183), (63, 7192), (70, 7252),

Gene: Bazzle_9 Start: 7180, Stop: 7644, Start Num: 7

Candidate Starts for Bazzle_9:

(Start: 7 @7180 has 77 MA's), (Start: 16 @7207 has 2 MA's), (Start: 18 @7219 has 1 MA's), (30, 7294), (31, 7297), (36, 7345), (40, 7357), (41, 7360), (51, 7414), (61, 7510), (63, 7519), (75, 7591), (82, 7630), (83, 7633),

Gene: Bellis_10 Start: 7367, Stop: 7843, Start Num: 7

Candidate Starts for Bellis_10:

(Start: 7 @7367 has 77 MA's), (Start: 18 @7406 has 1 MA's), (26, 7457), (30, 7487), (31, 7490), (36, 7538), (39, 7547), (40, 7550), (41, 7553), (51, 7607), (52, 7622), (57, 7667), (61, 7703),

Gene: BigCheese_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for BigCheese_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: BobsGarage_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for BobsGarage_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Bongo_19 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for Bongo_19:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: Breezona_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Breezona_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Bricole_19 Start: 11030, Stop: 11512, Start Num: 4

Candidate Starts for Bricole_19:

(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: Bromden_9 Start: 6960, Stop: 7424, Start Num: 7

Candidate Starts for Bromden_9:

(Start: 7 @6960 has 77 MA's), (Start: 18 @6999 has 1 MA's), (20, 7008), (30, 7074), (31, 7077), (33, 7089), (36, 7125), (39, 7134), (40, 7137), (41, 7140), (51, 7194), (62, 7293), (63, 7299), (75, 7371), (82, 7410), (83, 7413),

Gene: Calm_9 Start: 7247, Stop: 7714, Start Num: 7

Candidate Starts for Calm_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: Cassia_8 Start: 7956, Stop: 8351, Start Num: 8

Candidate Starts for Cassia_8:

(Start: 8 @7956 has 11 MA's), (39, 8148), (46, 8193),

Gene: Chaser_9 Start: 6965, Stop: 7429, Start Num: 7

Candidate Starts for Chaser_9:

(Start: 7 @6965 has 77 MA's), (Start: 18 @7004 has 1 MA's), (20, 7013), (30, 7079), (31, 7082), (33, 7094), (36, 7130), (39, 7139), (40, 7142), (41, 7145), (51, 7199), (62, 7298), (63, 7304), (75, 7376), (82, 7415), (83, 7418),

Gene: CicholasNage_9 Start: 7247, Stop: 7714, Start Num: 7

Candidate Starts for CicholasNage_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: Claus_9 Start: 7239, Stop: 7703, Start Num: 7

Candidate Starts for Claus_9:

(Start: 7 @7239 has 77 MA's), (Start: 16 @7266 has 2 MA's), (Start: 18 @7278 has 1 MA's), (20, 7287), (30, 7353), (31, 7356), (36, 7404), (40, 7416), (41, 7419), (51, 7473), (57, 7533), (61, 7569), (63, 7578), (75, 7650), (82, 7689), (83, 7692),

Gene: Clautastrophe_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Clautastrophe_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: Community_9 Start: 8908, Stop: 9315, Start Num: 8

Candidate Starts for Community_9:

(Start: 8 @8908 has 11 MA's), (35, 9088), (38, 9097), (39, 9100), (41, 9106),

Gene: Cosmo_31 Start: 14169, Stop: 14645, Start Num: 7

Candidate Starts for Cosmo_31:

(Start: 7 @14169 has 77 MA's), (12, 14181), (24, 14253), (28, 14271), (31, 14295), (46, 14394), (49, 14403), (55, 14433), (64, 14520), (70, 14565), (77, 14592), (78, 14598),

Gene: Crewmate_9 Start: 8291, Stop: 8698, Start Num: 8

Candidate Starts for Crewmate_9:

(Start: 8 @8291 has 11 MA's), (35, 8471), (39, 8483), (46, 8528),

Gene: Crossroads_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Crossroads_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Diminimus_20 Start: 11030, Stop: 11512, Start Num: 4

Candidate Starts for Diminimus_20:

(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: DirkDirk_9 Start: 7248, Stop: 7715, Start Num: 7

Candidate Starts for DirkDirk_9:

(Start: 7 @7248 has 77 MA's), (Start: 16 @7275 has 2 MA's), (Start: 18 @7287 has 1 MA's), (26, 7332), (29, 7344), (30, 7362), (31, 7365), (36, 7413), (40, 7425), (41, 7428), (51, 7482), (57, 7542), (63, 7587), (81, 7698), (82, 7701), (83, 7704),

Gene: Douge_9 Start: 6911, Stop: 7375, Start Num: 7

Candidate Starts for Douge_9:

(Start: 7 @6911 has 77 MA's), (Start: 18 @6950 has 1 MA's), (20, 6959), (30, 7025), (31, 7028), (33, 7040), (36, 7076), (39, 7085), (40, 7088), (41, 7091), (51, 7145), (62, 7244), (63, 7250), (75, 7322), (82, 7361), (83, 7364),

Gene: DrManhattan_8 Start: 7844, Stop: 8248, Start Num: 8

Candidate Starts for DrManhattan_8:

(Start: 8 @7844 has 11 MA's), (35, 8024), (39, 8036),

Gene: DrSeegs_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for DrSeegs_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: DrSierra_8 Start: 7783, Stop: 8259, Start Num: 1

Candidate Starts for DrSierra_8:

(Start: 1 @7783 has 1 MA's), (2, 7828), (9, 7855),

Gene: Dulcita_20 Start: 11030, Stop: 11512, Start Num: 4
Candidate Starts for Dulcita_20:
(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: DuncansLeg_10 Start: 7375, Stop: 7851, Start Num: 7
Candidate Starts for DuncansLeg_10:
(Start: 7 @7375 has 77 MA's), (Start: 18 @7414 has 1 MA's), (26, 7465), (30, 7495), (31, 7498), (36, 7546), (37, 7549), (39, 7555), (40, 7558), (51, 7615), (52, 7630), (57, 7675), (61, 7711),

Gene: DyoEdafos_10 Start: 7121, Stop: 7585, Start Num: 7
Candidate Starts for DyoEdafos_10:
(Start: 7 @7121 has 77 MA's), (Start: 18 @7160 has 1 MA's), (30, 7235), (33, 7250), (36, 7286), (39, 7295), (40, 7298), (41, 7301), (51, 7355), (62, 7454), (63, 7460), (75, 7532), (82, 7571), (83, 7574),

Gene: Ellson_10 Start: 7383, Stop: 7859, Start Num: 7
Candidate Starts for Ellson_10:
(Start: 7 @7383 has 77 MA's), (Start: 18 @7422 has 1 MA's), (26, 7473), (30, 7503), (31, 7506), (36, 7554), (37, 7557), (40, 7566), (51, 7623), (52, 7638), (57, 7683), (61, 7719), (76, 7806),

Gene: EmiRose_8 Start: 7240, Stop: 7716, Start Num: 4
Candidate Starts for EmiRose_8:
(Start: 4 @7240 has 21 MA's), (5, 7246), (31, 7375), (36, 7420), (39, 7429), (40, 7432), (65, 7609), (70, 7651),

Gene: Enceladus_9 Start: 7248, Stop: 7715, Start Num: 7
Candidate Starts for Enceladus_9:
(Start: 7 @7248 has 77 MA's), (Start: 16 @7275 has 2 MA's), (Start: 18 @7287 has 1 MA's), (26, 7332), (29, 7344), (30, 7362), (31, 7365), (36, 7413), (40, 7425), (41, 7428), (51, 7482), (57, 7542), (63, 7587), (81, 7698), (82, 7701), (83, 7704),

Gene: EniyanLRS_28 Start: 13863, Stop: 14339, Start Num: 7
Candidate Starts for EniyanLRS_28:
(Start: 7 @13863 has 77 MA's), (12, 13875), (24, 13947), (28, 13965), (31, 13989), (46, 14088), (49, 14097), (55, 14127), (64, 14214), (70, 14259), (77, 14286), (78, 14292),

Gene: Estes_24 Start: 11731, Stop: 12213, Start Num: 4
Candidate Starts for Estes_24:
(Start: 4 @11731 has 21 MA's), (Start: 18 @11782 has 1 MA's), (28, 11836), (36, 11911), (68, 12115), (72, 12139),

Gene: Faith1_9 Start: 7231, Stop: 7695, Start Num: 7
Candidate Starts for Faith1_9:
(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Finemlucis_9 Start: 7231, Stop: 7695, Start Num: 7
Candidate Starts for Finemlucis_9:
(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Finnry_10 Start: 7368, Stop: 7844, Start Num: 7

Candidate Starts for Finnry_10:

(Start: 7 @7368 has 77 MA's), (Start: 18 @7407 has 1 MA's), (26, 7458), (30, 7488), (31, 7491), (36, 7539), (39, 7548), (40, 7551), (41, 7554), (51, 7608), (52, 7623), (57, 7668), (61, 7704),

Gene: Gabriela_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Gabriela_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681),

Gene: Gardann_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Gardann_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: GardenSalsa_23 Start: 11567, Stop: 12049, Start Num: 4

Candidate Starts for GardenSalsa_23:

(Start: 4 @11567 has 21 MA's), (Start: 18 @11618 has 1 MA's), (28, 11672), (36, 11747), (68, 11951), (72, 11975),

Gene: GenevaB15_23 Start: 11594, Stop: 12076, Start Num: 4

Candidate Starts for GenevaB15_23:

(Start: 4 @11594 has 21 MA's), (Start: 18 @11645 has 1 MA's), (28, 11699), (36, 11774), (68, 11978), (72, 12002),

Gene: Glaske16_20 Start: 11030, Stop: 11512, Start Num: 4

Candidate Starts for Glaske16_20:

(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: GuuelaD_9 Start: 7264, Stop: 7728, Start Num: 7

Candidate Starts for GuuelaD_9:

(Start: 7 @7264 has 77 MA's), (Start: 16 @7291 has 2 MA's), (Start: 18 @7303 has 1 MA's), (31, 7381), (36, 7429), (40, 7441), (41, 7444), (51, 7498), (57, 7558), (63, 7603), (75, 7675), (82, 7714), (83, 7717),

Gene: Hafay_9 Start: 7264, Stop: 7728, Start Num: 7

Candidate Starts for Hafay_9:

(Start: 7 @7264 has 77 MA's), (Start: 16 @7291 has 2 MA's), (Start: 18 @7303 has 1 MA's), (30, 7378), (31, 7381), (36, 7429), (40, 7441), (41, 7444), (51, 7498), (63, 7603), (75, 7675), (82, 7714), (83, 7717),

Gene: Halena_9 Start: 7247, Stop: 7714, Start Num: 7

Candidate Starts for Halena_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: IPHane7_19 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for IPHane7_19:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: Iter_8 Start: 7909, Stop: 8259, Start Num: 21

Candidate Starts for Iter_8:

(Start: 8 @7852 has 11 MA's), (Start: 21 @7909 has 1 MA's), (39, 8044), (46, 8089),

Gene: Itos_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Itos_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: IttyBittyPiggy_8 Start: 7843, Stop: 8253, Start Num: 8

Candidate Starts for IttyBittyPiggy_8:

(Start: 8 @7843 has 11 MA's), (39, 8035), (46, 8080),

Gene: Jobypre_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Jobypre_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: JoeDirt_9 Start: 7247, Stop: 7714, Start Num: 7

Candidate Starts for JoeDirt_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: Jubie_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Jubie_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: JuneStar_8 Start: 7957, Stop: 8352, Start Num: 8

Candidate Starts for JuneStar_8:

(Start: 8 @7957 has 11 MA's), (46, 8194),

Gene: Kahlid_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Kahlid_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Kingsolomon_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Kingsolomon_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: Krypton555_10 Start: 7360, Stop: 7836, Start Num: 7

Candidate Starts for Krypton555_10:

(Start: 7 @7360 has 77 MA's), (Start: 18 @7399 has 1 MA's), (26, 7450), (30, 7480), (31, 7483), (34, 7513), (36, 7531), (39, 7540), (40, 7543), (41, 7546), (51, 7600), (52, 7615), (57, 7660), (61, 7696),

Gene: Kudrefre_17 Start: 10644, Stop: 11111, Start Num: 7

Candidate Starts for Kudrefre_17:

(6, 10641), (Start: 7 @10644 has 77 MA's), (11, 10653), (Start: 18 @10683 has 1 MA's), (23, 10719), (27, 10737), (36, 10812), (40, 10824), (41, 10827), (54, 10902), (63, 10986), (64, 10992), (79, 11076), (80, 11082),

Gene: Kumao_18 Start: 10373, Stop: 10849, Start Num: 7

Candidate Starts for Kumao_18:

(Start: 7 @10373 has 77 MA's), (14, 10391), (Start: 18 @10412 has 1 MA's), (19, 10418), (25, 10460), (28, 10472), (45, 10583), (46, 10601), (50, 10613), (69, 10754), (71, 10772), (74, 10784),

Gene: LeBron_9 Start: 7274, Stop: 7714, Start Num: 16

Candidate Starts for LeBron_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: Lewan_9 Start: 7270, Stop: 7695, Start Num: 18

Candidate Starts for Lewan_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: LilDestine_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for LilDestine_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: LilhomieP_18 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for LilhomieP_18:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: Loadrie_9 Start: 7264, Stop: 7728, Start Num: 7

Candidate Starts for Loadrie_9:

(Start: 7 @7264 has 77 MA's), (Start: 16 @7291 has 2 MA's), (Start: 18 @7303 has 1 MA's), (30, 7378), (31, 7381), (36, 7429), (40, 7441), (41, 7444), (51, 7498), (63, 7603), (75, 7675), (82, 7714), (83, 7717),

Gene: Lolly9_10 Start: 7378, Stop: 7854, Start Num: 7

Candidate Starts for Lolly9_10:

(Start: 7 @7378 has 77 MA's), (Start: 18 @7417 has 1 MA's), (26, 7468), (30, 7498), (31, 7501), (36, 7549), (39, 7558), (40, 7561), (41, 7564), (51, 7618), (52, 7633), (57, 7678), (61, 7714),

Gene: Lumos_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Lumos_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: MAckerman_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for MAckerman_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: MaryV_31 Start: 14135, Stop: 14611, Start Num: 7

Candidate Starts for MaryV_31:

(Start: 7 @14135 has 77 MA's), (12, 14147), (24, 14219), (28, 14237), (31, 14261), (46, 14360), (49, 14369), (55, 14399), (64, 14486), (70, 14531), (77, 14558), (78, 14564),

Gene: Miley16_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Miley16_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: MiniLon_10 Start: 7378, Stop: 7854, Start Num: 7

Candidate Starts for MiniLon_10:

(Start: 7 @7378 has 77 MA's), (Start: 18 @7417 has 1 MA's), (26, 7468), (30, 7498), (31, 7501), (36, 7549), (39, 7558), (40, 7561), (41, 7564), (51, 7618), (52, 7633), (57, 7678), (61, 7714),

Gene: MiniMac_10 Start: 7379, Stop: 7855, Start Num: 7

Candidate Starts for MiniMac_10:

(Start: 7 @7379 has 77 MA's), (Start: 18 @7418 has 1 MA's), (26, 7469), (30, 7499), (31, 7502), (36, 7550), (39, 7559), (40, 7562), (41, 7565), (51, 7619), (52, 7634), (57, 7679), (61, 7715),

Gene: MissSwiss_8 Start: 7857, Stop: 8261, Start Num: 8

Candidate Starts for MissSwiss_8:

(Start: 8 @7857 has 11 MA's), (32, 7992), (35, 8037), (39, 8049),

Gene: MkaliMitinis3_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for MkaliMitinis3_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Moostard_10 Start: 7367, Stop: 7843, Start Num: 7

Candidate Starts for Moostard_10:

(Start: 7 @7367 has 77 MA's), (Start: 18 @7406 has 1 MA's), (26, 7457), (30, 7487), (31, 7490), (36, 7538), (39, 7547), (40, 7550), (41, 7553), (51, 7607), (52, 7622), (57, 7667), (61, 7703),

Gene: MrMagoo_23 Start: 11567, Stop: 12049, Start Num: 4

Candidate Starts for MrMagoo_23:

(Start: 4 @11567 has 21 MA's), (Start: 18 @11618 has 1 MA's), (28, 11672), (36, 11747), (68, 11951), (72, 11975),

Gene: MsGreen_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for MsGreen_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: Nanosmite_23 Start: 11785, Stop: 12267, Start Num: 4

Candidate Starts for Nanosmite_23:

(3, 11779), (Start: 4 @11785 has 21 MA's), (Start: 10 @11806 has 1 MA's), (Start: 18 @11836 has 1 MA's), (36, 11965), (72, 12193),

Gene: Netyap_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Netyap_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681),

(83, 7684),

Gene: Neville_17 Start: 10452, Stop: 10922, Start Num: 7

Candidate Starts for Neville_17:

(Start: 7 @10452 has 77 MA's), (40, 10653), (41, 10656), (42, 10659), (43, 10668), (44, 10674), (48, 10701), (60, 10785), (73, 10869), (79, 10899), (80, 10905),

Gene: Nicholas_10 Start: 7371, Stop: 7847, Start Num: 7

Candidate Starts for Nicholas_10:

(Start: 7 @7371 has 77 MA's), (Start: 18 @7410 has 1 MA's), (26, 7461), (30, 7491), (31, 7494), (36, 7542), (39, 7551), (40, 7554), (41, 7557), (51, 7611), (52, 7626), (57, 7671), (61, 7707),

Gene: Nicholasp3_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Nicholasp3_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Nitro_8 Start: 7844, Stop: 8251, Start Num: 8

Candidate Starts for Nitro_8:

(Start: 8 @7844 has 11 MA's), (39, 8036), (46, 8081),

Gene: ObiToo_8 Start: 8041, Stop: 8436, Start Num: 8

Candidate Starts for ObiToo_8:

(Start: 8 @8041 has 11 MA's), (35, 8221), (39, 8233), (46, 8278),

Gene: Octobien14_18 Start: 11707, Stop: 12174, Start Num: 7

Candidate Starts for Octobien14_18:

(6, 11704), (Start: 7 @11707 has 77 MA's), (11, 11716), (Start: 18 @11746 has 1 MA's), (23, 11782), (36, 11875), (40, 11887), (41, 11890), (54, 11965), (63, 12049), (64, 12055), (65, 12058), (66, 12064), (79, 12139), (80, 12145),

Gene: OhShagHennessy_9 Start: 7220, Stop: 7687, Start Num: 7

Candidate Starts for OhShagHennessy_9:

(Start: 7 @7220 has 77 MA's), (Start: 16 @7247 has 2 MA's), (Start: 18 @7259 has 1 MA's), (26, 7304), (29, 7316), (30, 7334), (31, 7337), (36, 7385), (40, 7397), (41, 7400), (51, 7454), (57, 7514), (63, 7559), (81, 7670), (82, 7673), (83, 7676),

Gene: PegLeg_19 Start: 11030, Stop: 11512, Start Num: 4

Candidate Starts for PegLeg_19:

(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: Pumpkins_17 Start: 7958, Stop: 8353, Start Num: 8

Candidate Starts for Pumpkins_17:

(Start: 8 @7958 has 11 MA's), (39, 8150), (46, 8195),

Gene: Rabbitrun_19 Start: 10976, Stop: 11446, Start Num: 7

Candidate Starts for Rabbitrun_19:

(Start: 7 @10976 has 77 MA's), (Start: 18 @11015 has 1 MA's), (36, 11165), (43, 11192), (44, 11198), (47, 11222), (59, 11303), (60, 11309), (65, 11342), (73, 11393), (79, 11423), (80, 11429),

Gene: Reedo_8 Start: 7890, Stop: 8297, Start Num: 8

Candidate Starts for Reedo_8:

(Start: 8 @7890 has 11 MA's), (35, 8070),

Gene: Reindeer_17 Start: 10883, Stop: 11365, Start Num: 4

Candidate Starts for Reindeer_17:

(Start: 4 @10883 has 21 MA's), (Start: 18 @10934 has 1 MA's), (22, 10961), (33, 11024), (36, 11063), (68, 11267), (72, 11291),

Gene: Rey_23 Start: 11802, Stop: 12284, Start Num: 4

Candidate Starts for Rey_23:

(Start: 4 @11802 has 21 MA's), (Start: 18 @11853 has 1 MA's), (28, 11907), (36, 11982), (68, 12186), (72, 12210),

Gene: Rose5_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Rose5_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Rumpelstiltskin_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Rumpelstiltskin_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Samty_10 Start: 7367, Stop: 7843, Start Num: 7

Candidate Starts for Samty_10:

(Start: 7 @7367 has 77 MA's), (Start: 18 @7406 has 1 MA's), (26, 7457), (30, 7487), (31, 7490), (36, 7538), (39, 7547), (40, 7550), (41, 7553), (51, 7607), (52, 7622), (57, 7667), (61, 7703),

Gene: Sephiroth_18 Start: 10815, Stop: 11282, Start Num: 7

Candidate Starts for Sephiroth_18:

(6, 10812), (Start: 7 @10815 has 77 MA's), (11, 10824), (Start: 18 @10854 has 1 MA's), (23, 10890), (27, 10908), (36, 10983), (40, 10995), (41, 10998), (54, 11073), (63, 11157), (64, 11163), (79, 11247), (80, 11253),

Gene: Silverleaf_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Silverleaf_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Skinny_20 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for Skinny_20:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: SlimJimmy_18 Start: 11030, Stop: 11512, Start Num: 4

Candidate Starts for SlimJimmy_18:

(Start: 4 @11030 has 21 MA's), (Start: 18 @11081 has 1 MA's), (36, 11210), (68, 11414), (72, 11438),

Gene: Snenia_10 Start: 7372, Stop: 7848, Start Num: 7

Candidate Starts for Snenia_10:

(Start: 7 @7372 has 77 MA's), (Start: 18 @7411 has 1 MA's), (26, 7462), (30, 7492), (31, 7495), (36, 7543), (39, 7552), (40, 7555), (41, 7558), (51, 7612), (52, 7627), (57, 7672), (61, 7708),

Gene: Syleon_18 Start: 10737, Stop: 11204, Start Num: 7

Candidate Starts for Syleon_18:

(6, 10734), (Start: 7 @10737 has 77 MA's), (11, 10746), (Start: 18 @10776 has 1 MA's), (23, 10812), (27, 10830), (36, 10905), (40, 10917), (41, 10920), (54, 10995), (63, 11079), (64, 11085), (79, 11169), (80, 11175),

Gene: Tourach_9 Start: 7244, Stop: 7708, Start Num: 7

Candidate Starts for Tourach_9:

(Start: 7 @7244 has 77 MA's), (Start: 16 @7271 has 2 MA's), (Start: 18 @7283 has 1 MA's), (20, 7292), (30, 7358), (31, 7361), (36, 7409), (40, 7421), (41, 7424), (51, 7478), (57, 7538), (63, 7583), (75, 7655), (82, 7694), (83, 7697),

Gene: Trax_17 Start: 10452, Stop: 10922, Start Num: 7

Candidate Starts for Trax_17:

(Start: 7 @10452 has 77 MA's), (37, 10644), (40, 10653), (41, 10656), (42, 10659), (43, 10668), (44, 10674), (48, 10701), (60, 10785), (73, 10869), (79, 10899), (80, 10905),

Gene: TyDawg_19 Start: 11031, Stop: 11513, Start Num: 4

Candidate Starts for TyDawg_19:

(Start: 4 @11031 has 21 MA's), (Start: 18 @11082 has 1 MA's), (36, 11211), (68, 11415), (72, 11439),

Gene: Tyson_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Tyson_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: UPIE_9 Start: 7271, Stop: 7711, Start Num: 16

Candidate Starts for UPIE_9:

(Start: 7 @7244 has 77 MA's), (Start: 16 @7271 has 2 MA's), (Start: 18 @7283 has 1 MA's), (26, 7328), (29, 7340), (30, 7358), (31, 7361), (36, 7409), (40, 7421), (41, 7424), (51, 7478), (57, 7538), (63, 7583), (81, 7694), (82, 7697), (83, 7700),

Gene: VResidence_8 Start: 7916, Stop: 8323, Start Num: 8

Candidate Starts for VResidence_8:

(Start: 8 @7916 has 11 MA's), (39, 8108),

Gene: Vetrix_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Vetrix_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Wamburgxpress_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Wamburgxpress_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Whirlwind_11 Start: 7365, Stop: 7841, Start Num: 7

Candidate Starts for Whirlwind_11:

(Start: 7 @7365 has 77 MA's), (Start: 18 @7404 has 1 MA's), (26, 7455), (30, 7485), (31, 7488), (36, 7536), (37, 7539), (39, 7545), (40, 7548), (41, 7551), (51, 7605), (57, 7665), (63, 7710),

Gene: Wigglewiggles_9 Start: 7264, Stop: 7728, Start Num: 7

Candidate Starts for Wigglewiggles_9:

(Start: 7 @7264 has 77 MA's), (Start: 16 @7291 has 2 MA's), (Start: 18 @7303 has 1 MA's), (30, 7378), (31, 7381), (36, 7429), (40, 7441), (41, 7444), (51, 7498), (63, 7603), (75, 7675), (82, 7714), (83, 7717),

Gene: Wildcat_31 Start: 14145, Stop: 14621, Start Num: 7

Candidate Starts for Wildcat_31:

(Start: 7 @14145 has 77 MA's), (12, 14157), (24, 14229), (28, 14247), (31, 14271), (46, 14370), (49, 14379), (55, 14409), (64, 14496), (70, 14541), (77, 14568), (78, 14574),

Gene: Wilder_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Wilder_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Wildwest_9 Start: 8762, Stop: 9178, Start Num: 8

Candidate Starts for Wildwest_9:

(Start: 8 @8762 has 11 MA's), (39, 8954), (53, 9029),

Gene: Winky_9 Start: 7231, Stop: 7695, Start Num: 7

Candidate Starts for Winky_9:

(Start: 7 @7231 has 77 MA's), (Start: 16 @7258 has 2 MA's), (Start: 18 @7270 has 1 MA's), (30, 7345), (31, 7348), (36, 7396), (40, 7408), (41, 7411), (51, 7465), (63, 7570), (75, 7642), (82, 7681), (83, 7684),

Gene: Wyatt2_9 Start: 7246, Stop: 7713, Start Num: 7

Candidate Starts for Wyatt2_9:

(Start: 7 @7246 has 77 MA's), (Start: 16 @7273 has 2 MA's), (Start: 18 @7285 has 1 MA's), (26, 7330), (29, 7342), (30, 7360), (31, 7363), (36, 7411), (40, 7423), (41, 7426), (51, 7480), (57, 7540), (63, 7585), (81, 7696), (82, 7699), (83, 7702),

Gene: Yang_8 Start: 7957, Stop: 8352, Start Num: 8

Candidate Starts for Yang_8:

(Start: 8 @7957 has 11 MA's), (39, 8149), (46, 8194),

Gene: Zakai_9 Start: 7219, Stop: 7683, Start Num: 7

Candidate Starts for Zakai_9:

(Start: 7 @7219 has 77 MA's), (Start: 16 @7246 has 2 MA's), (Start: 18 @7258 has 1 MA's), (30, 7333), (31, 7336), (36, 7384), (40, 7396), (41, 7399), (51, 7453), (63, 7558), (75, 7630), (82, 7669), (83, 7672),

Gene: Zaria_9 Start: 7247, Stop: 7714, Start Num: 7

Candidate Starts for Zaria_9:

(Start: 7 @7247 has 77 MA's), (Start: 16 @7274 has 2 MA's), (Start: 18 @7286 has 1 MA's), (26, 7331), (29, 7343), (30, 7361), (31, 7364), (36, 7412), (40, 7424), (41, 7427), (51, 7481), (57, 7541), (63, 7586), (81, 7697), (82, 7700), (83, 7703),

Gene: ZhongYanYuan_8 Start: 7059, Stop: 7523, Start Num: 7

Candidate Starts for ZhongYanYuan_8:

(Start: 7 @7059 has 77 MA's), (Start: 16 @7086 has 2 MA's), (Start: 18 @7098 has 1 MA's), (20, 7107), (30, 7173), (31, 7176), (36, 7224), (40, 7236), (41, 7239), (51, 7293), (57, 7353), (61, 7389), (63, 7398), (75, 7470), (82, 7509), (83, 7512),